

DERWENT-ACC-NO: 1999-308175
DERWENT-WEEK: 199929
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TITLE: Liquid injection sealing under-fill material for semiconductors - comprises an epoxy resin which is liquid at a normal temperature, cyanate esters, bisphenol compound, an imidazole, a metal complex catalyst and spherical inorganic filler

PATENT-ASSIGNEE:

ASSIGNEE	CODE
SUMITOMO BAKELITE CO LTD	SUMB

PRIORITY-DATA: 1997JP-0276757 (October 9, 1997)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>JP 11106481 A</u>	April 20, 1999		006	C08G059/62

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP11106481A	October 9, 1997	1997JP-0276757	

INT-CL (IPC): C08 G 59/62; C08 G 59/68; C08 K 3/00; C08 L 63/00; H01 L 23/29; H01 L 23/31

ABSTRACTED-PUB-NO: JP11106481A
BASIC-ABSTRACT:

A liquid injection sealing under-fill material, comprising: (A) 100 pts.wt. of an epoxy resin which is liquid at a normal temperature; (B) 100 - 150 pts.wt. of a cyanate ester of formula (I) (pts.wt.) and a cyanate ester of formula (II) (b pts.wt.) (total of a + b is 100 and $0.15 = \text{or} < a/(a+b) = \text{or} < 0.5$); (C) 5 - 30 pts.wt. of a bisphenol compound of formula (III); (D) 0.3 - 2 pts.wt. of an imidazole; (E) a metal complex catalyst and (F) spherical inorganic filler. In formulae, R1, R2 = H or alkyl of 1-10C (at least either R1 or R2 is an alkyl); R3 = alkylene of 2-10C.

USE - The liquid injection sealing under-fill material is useful for liquid injection sealing of semiconductor devices.

ADVANTAGE - The liquid injection sealing under-fill material used for a gap between a flip chip and a printed circuit board will provide reliable flip chip mounting which can pass IR reflow test after JEDEC level 3 moisture uptake treatment.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: LIQUID INJECTION SEAL FILL MATERIAL SEMICONDUCTOR COMPRISE EPOXY RESIN LIQUID NORMAL TEMPERATURE CYANATE BISPHENOL COMPOUND IMIDAZOLE METAL COMPLEX CATALYST SPHERE INORGANIC FILL

DERWENT-CLASS: A21 A85 L03 U11

CPI-CODES: A02-A00A; A04-D; A05-A01E2; A08-C09; A08-D03; A08-R01; A10-B01; A11-B12A;